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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,524	06/20/2000	Harry J. Beatty, III	FIS9-1999-0319-US1	5261

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EXAMINER

ALI, SYED J

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/597,524	BEATTY, III ET AL.	
	Examiner	Art Unit	
	Syed J Ali	2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed October 29, 2004. Claims 1-5, 7-9, and 11-15 are presented for examination.
2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Specification

3. The cross reference related to the application cited in the specification must be updated (i.e. update the relevant status, with PTO serial numbers or patent numbers where appropriate, on page 1, lines 4-9). The entire specification should be so revised.

Claim Rejections - 35 USC § 102

4. **Claims 1-5, 7-9, and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Sievert et al. (USPN 6,687,729) (hereinafter Sievert).**
5. As per claim 1, Sievert teaches the invention as claimed, including a method of parallel processing in a memory structure comprising:

creating a first thread in the memory structure which represents an independent flow of control managed by a program structure (col. 6 lines 16-17), said first thread having two states, a first state processing work for the program structure and a second state undispatched awaiting work to process (col. 4 lines 17-23);

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providing a second thread in the memory structure which represents an independent flow of control managed by a program structure separate from the first thread (col. 3 lines 24-26);

using the second thread to prepare work for the first thread to process (col. 3 lines 53-57);

placing the work prepared by the second thread in a queue for processing by the first thread (col. 3 lines 27-32);

if the first thread is awaiting work to process when the work prepared by the second thread is placed in the queue, dispatching the first thread and using it to process the work in the queue (col. 8 lines 62-67; col. 11 line 58 - col. 12 line 11);

if the first thread is processing other work when the work prepared by the second thread is placed in the queue, using the first thread to complete processing of the other work, access the work in the queue, and then process the work in the queue (col. 9 lines 12-31); and

using the program structure to destroy the first thread in the memory structure after the first thread completes a desired amount of work (col. 1 lines 33-36; col. 6 lines 18-19; col. 10 lines 29-42; col. 12 lines 40-48).

6. As per claim 2, Sievert teaches the invention as claimed, including the method of claim 1 wherein the second thread continues to place additional work in the queue, and the first thread sequentially processes the additional work in the queue as it completes processing prior work (col. 9 lines 12-31).

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7. As per claim 3, Sievert teaches the invention as claimed, including the method of claim 1 wherein the second thread marks the work placed in the first thread queue as not complete (col. 7 lines 31-33; col. 9 lines 12-16).

8. As per claim 4, Sievert teaches the invention as claimed, including the method of claim 1 wherein if the first thread is processing other work when the work prepared by the second thread is placed in the queue, and when the first thread completes processing of the work in the queue, using the first thread to mark the completed work as complete, wherein subsequent work from the second thread is made to wait until the previous work in the first thread is marked complete (col. 7 lines 36-38; col. 12 lines 23-34).

9. As per claim 5, Sievert teaches the invention as claimed, including the method of claim 1 wherein the first thread is reused to process other work before being destroyed (col. 1 lines 33-36; col. 12 lines 12-14).

As per claim 7, Sievert teaches the invention as claimed, including a method of parallel processing in a memory structure comprising:

creating a first thread in the memory structure which represents an independent flow of control managed by a program structure (col. 6 lines 16-17), said first thread having two states, a first state processing work for the program structure and a second state undispatched awaiting work to process (col. 4 lines 17-23);

providing a second thread in the memory structure which represents an independent flow of control managed by a program structure separate from the first thread (col. 3 lines 24-26);

using the second thread to prepare work for the first thread to process (col. 3 lines 53-57);

placing the work prepared by the second thread in a queue for processing by the first thread (col. 3 lines 27-32), the work placed in the first thread queue being marked as not complete (col. 7 lines 31-33; col. 9 lines 12-16);

if the first thread is awaiting work to process when the work prepared by the second thread is placed in the queue, dispatching the first thread and using it to process the work in the queue (col. 8 lines 62-67; col. 11 line 58 - col. 12 line 11);

if the first thread is processing other work when the work prepared by the second thread is placed in the queue, using the first thread to complete processing of the other work, access the work in the queue, and then process the work in the queue (col. 9 lines 12-31);

using the second thread to place additional work in the queue (col. 9 lines 12-31);

using the first thread to sequentially process the additional work in the queue as it completes processing prior work (col. 9 lines 12-31); and

using the program structure to destroy the first thread in the memory structure after the first thread completes a desired amount of work (col. 1 lines 33-36; col. 6 lines 18-19; col. 10 lines 29-42; col. 12 lines 40-48).

10. As per claim 8, Sievert teaches the invention as claimed, including the method of claim 7 wherein if the first thread is processing other work when the work prepared by the second thread is placed in the queue, and when the first thread completes processing of the work in the queue,

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using the first thread to mark the completed work as complete, wherein subsequent work from the second thread is made to wait until the previous work in the first thread is marked complete (col. 7 lines 36-38; col. 12 lines 23-34).

11. As per claim 9, Sievert teaches the invention as claimed, including the method of claim 7 wherein the first thread is reused to process other work (col. 1 lines 33-36; col. 12 lines 12-14).

12. As per claims 11-15, Sievert teaches the invention as claimed, including a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method steps of claims 1-5, respectively (col. 2 lines 14-17).

Response to Arguments

13. **Applicant's arguments with respect to claims 1-5, 7-9, and 11-5 have been considered but are moot in view of the new grounds of rejection.**

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali
February 8, 2005



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